

REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 1-34 are pending in this application. Claims 1-34 were objected to. Claims 27-34 were rejected under 35 U.S.C. § 112, second paragraph. Claims 16-18 were rejected under 35 U.S.C. § 101. Claims 10, 12, 20, 33, and 34 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. patent 6,038,074 to Kitaguchi et al. (herein "Kitaguchi") in view of U.S. patent 6,639,685 to Gu et al. (herein "Gu") and U.S. patent 6,765,606 to Iddan et al. (herein "Iddan"). Claim 11 was rejected under 35 U.S.C. § 103(a) as unpatentable over Kitaguchi in view of Gu and Iddan and further in view of U.S. patent 6,369,899 to Hamada. Claims 1-9, 13-15, 19, and 21-26 were noted as allowable if rewritten to overcome the objections thereto and to include all of the limitations of their base claims. Claims 16-18 were noted as allowable if rewritten to overcome the rejections under 35 U.S.C. § 101. Claims 27-32 were noted as allowable if rewritten to overcome the rejections under 35 U.S.C. § 112, second paragraph, and under 35 U.S.C. § 101.

Initially, applicants gratefully acknowledge the indication of the allowable subject matter in claims 1-19 and 21-32.

Addressing first the objection to claims 1-34, those objections are traversed by the present response.

Claims 1-34 are amended by the present response as suggested in paragraph 2 of the Office Action. Thereby, the objections to those claims is traversed by the present response.

Addressing now the rejection of claims 27-34 under 35 U.S.C. § 112, second paragraph, that rejection is traversed by the present response.

Claims 27-34 were rejected as the recitation to "the expressing d)" did not have clear antecedent basis. In reply, each of claims 27-34 is amended to more properly refer to the

“calculating d)”. That “calculating” has clear antecedent basis in claims 13, 16, and 20, from which claims 27-34 depend.

Addressing now the rejection of claims 16-18 and 20 under 35 U.S.C. § 101, that rejection is traversed by the present response.

Claims 16-19 and 20 were rejected as not reciting a “tangible result”. The Office Action noted those claims recite useful and concrete limitations, but there does not appear to be a “tangible result” claimed.

In reply to that rejection, independent claim 16 is amended by the present response to further recite the claimed program causes the computer to “produce a composed image based on the calculations”. Such a limitation is now believed to clearly set forth a “tangible result” in claims 16-18 and 20. Thereby, those claims are believed to be proper under 35 U.S.C. § 101.

Addressing now the rejection of claims 10, 12, 20, 33, and 34 under 35 U.S.C. § 103(a) as unpatentable over Kitaguchi in view of Gu and Iddan, and the further rejection of claim 11 further in view of Hamada, those rejections are traversed by the present response.

Each of independent claims 10 and 20 is amended by the present response to clarify features recited therein. Specifically, those claims now recite additional features similar to the features already indicated as allowable in independent claim 1.

Independent claim 10 now further recites:

a three-dimensional coordinate calculating part calculating a three-dimensional coordinate of each point of the object based on the rotation component and an image taken at the position; and

a three-dimensional shape composing part calculating a translation component of the position information, based on at least two of the three-dimensional coordinates for each point of the object calculated by said three-dimensional coordinate calculating part, based on each image obtained from taking a picture of the object, to which the light is applied from at least two different positions, and the rotation component, and expressing said each point, based on the translation component,

by a coordinate in a single coordinate system, and to produce a composed image.

The above-noted features are similar to features recited in allowed independent claim

1. Further, applicants respectfully submit the applied art does not disclose or suggest such a “three-dimensional coordinated calculating part” and the “three-dimensional shape composing part”. Thereby, amended independent claim 10, and the claims dependent therefrom, are also believed to be allowable.

Independent claim 20 now further recites to:

take a picture of the object;  
apply light having a predetermined pattern onto the object;  
detect, based on a gravity direction and an angle around the gravity direction by a sensor, a rotation component of position information specifying a position to take a picture of the object by the picture taking part.

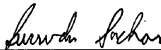
Similar features as noted above are also recited in independent claim 1, which again was noted as allowable in the Office Action. Applicants respectfully submit the applied art does not disclose or suggest the program causing the computer to “take a picture of the object”, “apply light having a predetermined pattern onto the object”, and “detect, based on a gravity direction and an angle around the gravity direction by a center, a rotation component of position information specifying a position to take a picture of the object by the picture taking part”, in combination with the two “calculating” operations already recited in independent claim 20. Thereby, amended independent claim 20, and the claims dependent therefrom, are also believed to distinguish over the applied art.

In summary, applicants respectfully submit each of the claims as written addresses the objections in the Office Action, is proper under 35 U.S.C. § 112, second paragraph, is in full compliance with all requirements under 35 U.S.C. § 101, and distinguishes over the applied art. Thereby, each of the claims as written is believed to be allowable.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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